

What Is Claimed Is:

1. A tripode joint comprising:
  - an outer joint part (11) with a first longitudinal axis (A11) and having an inner recess (14) and three uniformly circumferentially distributed recesses (15) which widen said inner recess (14) and which form pairs of circumferentially opposed tracks (16);
    - 5 a tripode star (12) with a second longitudinal axis (A12) and having a hub (17) and three uniformly circumferentially distributed tripode arms (19) which are arranged radially at said hub (17) and which each form an arm head (21) with a spherical surface portion (22); and
  - 10 a roller assembly (13), on each of the arm heads (21), each of the roller assemblies (13) being guided in one of the recesses (15), and each roller assembly (13) comprising an annular roller carrier (23), bearing needles (24) rotating on the roller carrier (23), and rollers (25) which are rotatably supported on the bearing needles (24),
  - 15 wherein the roller carriers (23), on their inner faces, each comprise a cylindrical arm contact face (40) and, on their outer faces, a cylindrical needle contact face (41),
    - wherein the roller carriers (23) are arranged on the arm heads (21) so as to be pivotable and displaceable along an arm axis (AZ) and
  - 20 wherein the rollers (25) roll on the tracks (16) with roller axes (AR) which are substantially axis-normal relative to the first longitudinal axis (A11),
    - wherein the roller carriers (23), on their outer faces, each comprise stop collars (38, 39) which delimit the needle contact face (41), and which are held with an axial displacement clearance (SA) in the direction of

the roller axes (AR) between axial securing members (26, 27) in such a way that they are secured against being lost relative to the rollers (25), and

5 wherein the roller carriers (23), on their inner faces, with reference to the first longitudinal axis (A11), at least on the radial inside end, each comprise cylindrical projections (42) which, with reference to the roller axes (AR), increase the axial length of the arm contact faces (40) beyond the extension of the needle contact faces (41).

10 2. A tripode joint according to claim 1, wherein, on the roller carriers (23), with reference to the first longitudinal axis (A11), on their radial outside end, the arm contact faces (40) and the needle contact faces (41) are flush with each other.

15 3. A tripode joint according to claim 1, wherein the roller carriers (23), with reference to the first longitudinal axis (A11), on the radial outside end, each comprise cylindrical projections (43) which, with reference to the roller axes (AR), increase the axial length of the arm contact faces (40) beyond the extension of the needle contact faces (41).

4. A tripode joint according to claim 1, wherein the axial securing members comprise at least one securing ring (26, 27) which engages an inner annular groove (36, 37) in the rollers (25).

20 5. A tripode joint according to claim 2, wherein the axial securing members comprise at least one securing ring (26, 27) which engages an inner annular groove (36, 37) in the rollers (25).

6. A tripode joint according to claim 3, wherein the axial securing members comprise at least one securing ring (26, 27) which engages an inner annular groove (36, 37) in the rollers (25).

7. A tripode joint according to claim 1, wherein, at the 5 roller assemblies, the axial length of the cylindrical projection (42) and the amount of the axial displacement clearance (SA) are dimensioned to be such that, with a joint articulation angle of at least 27°, the spherical surface portions (22) of the arm heads (21) are able to establish a carrying contact with the arm contact faces (40) of the roller carriers (23).

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8. A tripode joint according to claim 2, wherein, at the roller assemblies, the axial length of the cylindrical projection (42) and the amount of the axial displacement clearance (SA) are dimensioned to be such that, with a joint articulation angle of at least 27°, the spherical surface 15 portions (22) of the arm heads (21) are able to establish a carrying contact with the arm contact faces (40) of the roller carriers (23).

9. A tripode joint according to claim 3, wherein, at the roller assemblies, the axial length of the cylindrical projection (42) and the 20 amount of the axial displacement clearance (SA) are dimensioned to be such that, with a joint articulation angle of at least 27°, the spherical surface portions (22) of the arm heads (21) are able to establish a carrying contact with the arm contact faces (40) of the roller carriers (23).

10. A tripode joint according to claim 1, wherein the displacement clearance (SA) amounts to at least 5% of the carrying length of the bearing needles (24).

5 11. A tripode joint according to claim 2, wherein the displacement clearance (SA) amounts to at least 5% of the carrying length of the bearing needles (24).

10 12. A tripode joint according to claim 3, wherein the displacement clearance (SA) amounts to at least 5% of the carrying length of the bearing needles (24).

15 13. A tripode joint according to claim 4, wherein the displacement clearance (SA) amounts to at least 5% of the carrying length of the bearing needles (24).

14. A tripode joint according to claim 7, wherein the displacement clearance (SA) amounts to at least 5% of the carrying length of the bearing needles (24).

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15. A tripode joint according to claim 1, wherein the displacement clearance (SA) amounts to at least 10% of the carrying length of the bearing needles (24).

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16. A tripode joint according to claim 7, wherein the displacement clearance (SA) amounts to at least 10% of the carrying length of the bearing needles (24).